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AN ANALYSIS OF ENERGY POVERTY IN THE EUROPEAN UNION

by Abreham Adera*, Luciano Lavecchia**, Raffaele Miniaci* and Paola Valbonesi***

Abstract

Energy poverty is a significant challenge in the European Union (EU), impacting millions of households and undermining social equity during the ongoing energy transition. This study investigates energy poverty using harmonized data from the EU Household Budget Survey (EU-HBS) for the years 2010, 2015 and 2020. We evaluate the quality of the data, measurement methods and policy implications relating to energy poverty. Traditional metrics, such as the inability to keep homes adequately warm, are criticized for their limited reliability. We also analyse alternative expenditure-based indicators, including a modified version of the Low Income High Cost (LIHC) approach. Our results reveal substantial variations in energy poverty across member states, affecting nearly one fifth of the population in countries like France, Germany and Spain. The analysis highlights significant discrepancies in data harmonization, incomplete coverage and methodological challenges that impede cross-country comparisons. To address these issues, we recommend improving the data quality of the current household surveys. Our findings offer valuable insights for policymakers seeking to design effective interventions to alleviate energy poverty and promote equitable energy transitions.

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1. Introduction[1]

At the EU level, energy poverty means *"a household's lack of access to essential energy services, where such services provide basic levels and decent standards of living and health, including adequate heating, hot water, cooling, lighting, and energy to power appliances, in the relevant national context, existing national social policy and other relevant national policies, caused by a combination of factors, including at least non-affordability, insufficient disposable income, high energy expenditure and poor energy efficiency of homes"*.[2] This comprehensive definition lacks a corresponding harmonized measure that can be used consistently across member states. With Recommendation (EU) 2020/1563, the European Commission suggested a list of 13 indicators "from which Member States can choose those available and relevant to their context in order to identify energy poverty in their territory, reflecting different facets of energy poverty".[3] The most commonly used indicator is the percentage of the total population that cannot afford to keep their homes adequately warm, based on the EU statistics on income and living conditions (EU-SILC) question: "Can your household afford to keep its home adequately warm?".[4] The use of this question has been heavily debated as inappropriate; however, there has been no viable alternative, as EU-SILC is the only harmonized household survey available across the EU. Menyhert (2023) points out, using a unique database that combines SILC and the local Household Budget Survey (HBS) data in Hungary, that "different energy poverty measures tend to identify vastly different population segments as energy poor". The author finds weak overlap among various indicators when comparing the affordability question with other measures, highlighting the need for greater harmonization, integration, and refinement of existing survey data. Similarly, a recent report on transport poverty draws on data from the 2013 EU-SILC (Cludius et al. 2024) and the 2015 EU-HBS, raising concerns about the timeliness of this analysis, which is essential for policymakers.

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[1] We would like to thank Ilaria Arigoni, Marta Castellini, Andrea Cutillo, Domenico Depalo, Emilio Di Meglio, Ivan Faiella, Sigita Geske, Radoslav Istatkov, Balint Menyhert, Gwyneth Schaefer and Giovanna Tagliacozzo for their comments and suggestions.

[2] EU Energy Efficiency Directive (EU/2023/1791), art. 2 (52).

[3] Recommendation (EU) 2023/2047.

[4] For example, the latest policy brief from the Joint research center (JRC) of the European Commission, highlights that "Energy poverty is a pressing challenge in the European Union (EU), affecting over 45 million households in 2023, or 10.6% of the EU's population, who reported being unable to adequately heat their homes (Della Valle et al. 2024).

In order to address these issues, in September 2024, the Italian energy poverty observatory (OIPE) obtained the harmonized microdata of the EU-Household Budget Survey (EU-HBS) from Eurostat, for the years 2010, 2015 and 2020. The HBS is currently not regulated,[5] so it is a voluntary effort carried out through a collaboration between the National Statistical Offices (NSIs) and Eurostat. The HBS gathers information on household consumption expenditure every five years, corresponding to the frequency with which some member states carry out their own national surveys.

Actually, all the analyses on energy poverty at the EU level are based on the EU-SILC, a fully harmonized survey on household income and living conditions but which has some limitations. In particular, these analyses are based on three EU-SILC questions[6] with limited reliability. As widely recognised in the literature,[7] the main limitation of this 'consensual-based' metric is the inability to disentangle needs and preferences. For this reason, the European Commission enacted a review of the measure, commissioning a report that suggests at least three different ways to identify energy-poor metrics based on expenditure or income.[8] The three expenditure-based metrics of energy poverty proposed are: Share of Energy Expenditure Above Twice the National Median (2M), Low Income High Cost (LIHC), and Hidden Energy Poverty (HEP). However, these metrics are not without limitations and a composite metric may be more effective. Faiella and Lavecchia (2015, 2021) proposed a composite measure that combines LIHC and HEP, which is currently adopted by the Italian government. In this paper, this measure — henceforth referred to as M-LIHC (modified low-income, high-cost metric) — is compared with other metrics.

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[5] A new regulation, EU regulation 2019/1700, providing some harmonization, will take place from 2026. For additional information, see Eurostat website.

[6] The three questions are: 1) Can your household afford to keep its home adequately warm? 2) In the last twelve months, has the household been in arrears, i.e. has been unable to pay on time due to financial difficulties for utility bills (heating, electricity, gas, water, etc.) for the main dwelling? 3) Is your home having one of the following: "Leaking roof, damp walls/floors/foundation, or rot in window frames or floor".

[7] See for example Faiella and Lavecchia (2021), "Energy poverty. How can you fight it, if you can't measure it?", Energy and Buildings, Volume 233.

[8] Trinomics, "Selecting Indicators to Measure Energy Poverty" final report under the Pilot Project Energy Poverty – Assessment of the Impact of the Crisis and Review of Existing and Possible New Measures in the Member States, Framework Contract ENER/A4/516-2014, May 2016.

In Italy, energy poverty has been measured since the publication of the Government'
2017 Energy Strategy, leveraging on the national HBS and adopting a modified low-
income, high-cost approach (M_LIHC), following the proposal by Faiella and
Lavecchia (2015).[9] This estimator has been adopted in all the main Government
documents related to energy poverty (2017 Energy Strategy, 2019 National Energy
and Climate Plan, 2022 Plan for the Ecological Transition) until the 2024 National
Energy and Climate Plan, where the government announced a review of its approach.
Meanwhile, the Italian National Statistical Office (ISTAT) adopted the M_LIHC indicator
in its 2023 and 2024 reports. In the present analysis, we gauge energy poverty using
2 expenditure-based estimators, the historical 10 percent rule (TPR),[10] and a modified
version of the measure used in Italy[11] For comparison, we also consider the share of
households stating that they cannot keep their home adequately warm, a widely used
energy poverty measure.[12]

2. Data

For this project, we use the most recent available Eurostat Household Budget Survey
(HBS) data from the years 2010, 2015, and 2020. Expenditures are classified based
on the ECOICOP 2013 classification. We run our analysis on countries for which we
have at least one year of complete information on energy expenditure: we end up with
24 member states[13] out of 27. The EU (weighted) average is calculated based on the
data from these countries but, due to some data issues, some countries had to be

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[9] Ivan Faiella & Luciano Lavecchia, 2015. "**Energy Poverty in Italy**," Politica economica, Società editrice
il Mulino, issue 1, pages 27-76.

[10] According to this rule, a household is considered energy poor if its energy expenditure exceeds 10%
of its total expenditure. This is a largely adopted measure of energy poverty. For a review, see Thomson
et al. (2017) "Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators
and data. Indoor and built environment". Indoor and built environment, 26(7), 879-901.

[11] In many countries, there is no joint survey on household income and expenditure, only on household
expenditure. Therefore, we interpret this as 'Low expenditure, high (energy) costs.' Specifically, a
household is considered to have 'low expenditure' if its total spending, excluding energy costs, falls
below a certain poverty line (e.g., the at-risk-of-poverty threshold defined by Eurostat). Additionally, this
measure includes households whose heating expenditure is exactly zero and whose total equivalised
expenditure falls below the median. This group of households is referred to as 'hidden energy poor.' For
more information, see Faiella and Lavecchia (2021).

[12] For further information and data, see Eurostat.

[13] The countries considered are: Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia,
Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta,
Portugal, Poland, Romania, Slovenia, Slovakia, Spain and Sweden. Data for Croatia, the Netherlands
and Austria were not available. For a list of available countries for each wave, see Eurostat website.

dropped in some years (see more details on this below); therefore, we distinguish between an average based on the complete and on the partial panel. As a first check, we compare Eurostat HBS data with Istat's *Indagine sulle spese delle famiglie* (ISF, the Italian HBS, IT-HBS henceforth), which we have been using for years (e.g. OIPE 2024 and 2022) and it is our reference point for the current analysis. We expected to be able to replicate the same estimates of the average energy expenditure and the share of households in energy poverty in Italy in the same years. In practice, we note several issues in the data (Table 1).

Table 1

Annual Expenditure for Italy Using Eurostat and Istat
(euros, current prices)

Year	Source	Total Expense	Electricity	Heating	Gas	Liquid Fuels	Solid Fuels	Heat Energy
2010	EU-HBS	28,635.0	557.2	1,011.1	753.5	55.8	74.1	127.9
2010	IT-HBS	29,314.8	557.2	866.9	739.9	54.1	72.9	0
2010	**Difference**	**679.8**	**0.0**	**-144.2**	**-13.6**	**-1.7**	**-1.2**	**-127.9**
2015	EU-HBS	29,625.2	574.4	803.9	706.0	19.5	71.1	7.3
2015	IT-HBS	29,890.3	574.4	794.7	697.7	19.1	70.7	7.2
2015	**Difference**	**265.2**	**0.0**	**-9.2**	**-8.3**	**-0.3**	**-0.5**	**-0.2**
2020	EU-HBS	27,616.4	608.3	712.6	621.8	19.6	63.4	7.9
2020	IT-HBS	27,823.2	608.3	710.7	617.1	19.6	64.9	9.1
2020	**Difference**	**206.7**	**0.0**	**-2.0**	**-4.7**	**0.0**	**1.5**	**1.2**

First, according to the IT-HBS, households' expenditure on central heating, which is heavily utilized in Italy in densely populated urban areas, makes up 15-20% of the average heating costs in Italy. However, details on this specific expenditure are not

available in the EU-HBS, which uses the COICOP 2018 classification[14] and classifies this heating expenditure under "Maintenance charges in multi-occupied buildings" (code 04.4.4.1), making it impossible to separate central heating costs from other expenses, such as condominium administration fees. It appears that only in 2010 was central heating classified as "heat_energy".[15] Additionally, there is a discrepancy in overall expenditure reporting between IT-HBS and EU-HBS.

We also attempted to compare the estimated average energy expenditure for each member state with the official results from Eurostat; however, this is not feasible since Eurostat only publishes tables in purchasing power standards (PPS). Upon analyzing the data regarding the other member states, we have identified several important issues to address.

Firstly, since the EU-HBS is a voluntary effort, not all countries participated in each of the three years (2010, 2015, and 2020). Specifically, Ireland, Poland, Portugal, and Sweden participated only in 2010 and 2015, but not in 2020. Croatia participated in all years, while the Netherlands participated in 2015 and 2020, although this data was unavailable. Additionally, Eurostat generated the 2020 Household Budget Survey data for Cyprus, France, and Malta by inflating the 2015 HBS data using the corresponding Harmonized Index of Consumer Prices (HICP). For our analysis, these datasets convey no additional information with respect to the original 2015 data. Secondly, for countries with available datasets, some energy information was missing. Notably, Sweden did not provide energy expenditure data for 2010, so it is excluded from the analysis as it does not support over-time comparisons. Similarly, data on energy expenditure in Romania for 2020 are missing, leading to Romania's exclusion from the 2020 analysis. Additionally, Romania reported no data on liquid fuels in 2015, consistent with an average liquid fuel expenditure as low as €0.0365 in 2010. Finally, data on 'Heat_energy' are recorded as zero for certain countries across all years

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[14] The Classification of Individual Consumption According to Purpose (COICOP) is the international reference classification of household expenditure. The objective of COICOP is to provide a framework of homogeneous categories of goods and services, which are considered a function or purpose of household consumption expenditure. For further information, see UNSTATS, 2018.

[15] Heat energy is defined as "Hot water and steam purchased from district heating plants. Includes: associated expenditure such as hire of meters, reading of meters, standing charges, etc.." For further information, see UNSTATS, 2018.

(Belgium, Cyprus, Luxembourg, and Spain) or for specific years (e.g., Ireland in 2020). Lithuania also lacks data for liquid fuels in 2010.

Table 2

Complete and partial panel

	Country	complete panel (EU-16)	partial panel (EU-23)
1	Belgium	X	X
2	Bulgaria	X	X
3	Czech Rep.	X	X
4	Denmark	X	X
5	Estonia	X	X
6	Finland	X	X
7	Germany	X	X
8	Greece	X	X
9	Hungary	X	X
10	Italy	X	X
11	Latvia	X	X
12	Lithuania	X	X
13	Luxembourg	X	X
14	Slovakia	X	X
15	Slovenia	X	X
16	Spain	X	X
17	Cyprus		X
18	France		X
19	Ireland		X
20	Malta		X
21	Poland		X
22	Portugal		X
23	Romania		X

Following careful considerations, we decided to consider two samples for our analysis: a full panel, made up of 16 countries (EU-16) for which we observe data in each of the

three years; a partial panel, made up of 23 countries for which we have data on 2010 and 2015 only (Table 2).

Furthermore, Eurostat does not provide standardized sample weights for Europe; instead, it supplies the sample weights provided by each Member State. To address the absence of standardized sampling weights at the EU level, we estimate the share of households in energy poverty in the EU-23 and EU-16 as the weighted average of the share in each Member State. We use, as weights, the proportion of the population in country *i* at time *t*, relative to the total population in the EU-23 and EU-16, respectively, at time *t*.[16]

3. Assessing energy poverty in the European Union

The M_LIHC estimator has been in use in Italy since 2016 and relies on two important assumptions that may not be suitable for comparison across Europe. Specifically, M_LIHC uses Carbonaro's equivalence scale, which is employed by Istat for assessing poverty. Additionally, M_LIHC determines the "low income" threshold based on the relative poverty line (PL) defined by Istat[17].

Therefore, we decided to use the modified OECD equivalence scale and set the PL as 60% of the national median equivalised expenditure.[18] We tested the implications for Italy of these changes step-by-step to develop an M_LIHC_EU indicator.

In Table 3, we present the results of this analysis. Column 1 serves as our benchmark; it includes estimates derived from the IT-HBS data, using the national Carbonaro scale of equivalence and the relative poverty threshold. Columns 2-5 all utilize EU-HBS, and Columns 3-5 experiment with alternative combinations of equivalence scales and

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[16] The total population in EU-23 was 402,9 million in 2010, 403,9 million in 2015, and 406,3 million in 2020, whereas for EU-16 it was 263,4 million in 2010, 263,2 million in 2015, and 264,7 million in 2020.

[17] The relative poverty threshold, defined by Istat for a two-member household, is equal to the national per capita expenditure and is adjusted for different household sizes using Carbonaro's scale of equivalence.

[17] The relative poverty threshold, defined by Istat for a two-member household, is equal to the national per capita expenditure and is adjusted for different household sizes using Carbonaro's scale of equivalence.

[18] Eurostat defines the at-risk-of-poverty threshold, as 60% of the national <u>median</u> equivalised disposable income after <u>social transfers</u>. As in the EU-HBS income data is not present or unreliable, we use as PL 60% of the national median equivalised expenditure.

poverty line definitions. Specifically, Column 2 employs the Carbonaro scale and maintains the national ISTAT poverty line.

Table 3

Effects of local assumptions on assessing energy poverty in Italy
(percentage points)

Dataset	IT-HBS		EU-HBS		
	(1)	(2)	(3)	(4)	(5)
YEAR	Benchmark: Istat eq & PL	Istat eq & PL	Istat eq & EU PL	OECD eq & EU PL	Modified OECD eq & EU PL
2010	7.63	7.88	8.90	5.33	6.09
2015	7.74	8.24	10.63	6.06	6.97
2020	8.13	9.04	11.40	6.41	7.49

This approach allows for an examination of differences in the microdata, as previously discussed. Column 3 also uses the Carbonaro scale but sets the poverty line (PL) at 60% of the annual median equivalised expenditure. Columns 4 and 5 retain the poverty line definition from Column 3; however, they apply the OECD equivalence scale and the modified OECD equivalence scale, respectively.[19] The difference attributed to the changes in the data (comparing columns 2 and 1) is between 1 and 1.2 percentage points. When using the EU-HBS, the change in the poverty line results in an overestimation (compared to the baseline) of 2 to 3 percentage points (comparing columns 3 and 1), while the application of the OECD (and modified OECD)

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[19] The (modified) OECD equivalence scale gives the following values: 1.0 to the head of household; (0.5) 0.7 to the persons aged 14+; (0.3) 0.5 to each person aged under 14.

equivalence scales[20] leads to an underestimation (in columns 4 and 5 compared to 1) of 1 to 2 percentage points.

In Table 4 we also report the share of households below the poverty line normally used to assess poverty risk (e.g. those with an equivalised expenditure below 60% of the country-level median).

Table 4

Households below the EU poverty line
(percentage points and millions of units)

	a) as a share		b) millions of HHs	
	(1)	(2)	(3)	(4)
	EU-23	EU-16	EU-23	EU-16
2010	4.8	4.3	19.3	11.3
2015	5.8	5.2	23.4	13.7
2020	n.a.	5.3	n.a	14.0

In what follows, we compare energy poverty across European countries using the modified OECD scale of equivalence and consider 60% of the median equivalent energy-related expenditure as the poverty line (estimator M_LIHC_EU). Table 5 illustrates the share and absolute number of households experiencing energy poverty in the EU for the years 2010, 2015, and 2020, for both the partial panel (EU-23) and the complete panel (EU-16; see Table 2). We report the M_LICH_EU estimator as well as the TPR and the subjective question from EU_SILC. All estimators recorded an increase between 2010 and 2015 and, for the complete panel (EU-16), we also observe a decrease between 2015 and 2020. Our proposed estimator, M_LIHC_EU,

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[20] The correlation between the Carbonaro scale and the OECD equivalence scale is 0.9888. In comparison, the correlation between the Carbonaro scale and the modified OECD equivalence scale is 0.9809. Additionally, the correlation between the modified OECD equivalence scale and the OECD equivalence scale is 0.9983.

is 3 to 4 percentage points lower than the classical TPR but nearly double the rate of those classified as 'inadequately warm.' Also, in 2015, the M_LIHC_EU for the complete and partial panel are quite close (14.4 and 14.2 percent, respectively). According to our proposed estimator, in 2020, the most recent available year, 11.7 percent of households in the EU-16, or 30.9 million households, were energy poor.

Table 5

Households in Energy Poverty in the European Union
(percentage points and millions of units)

	share of households						millions of[21] households	
	M_LIHC_EU		inadequately[22] warm		TPR		M_LIHC_EU	
Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	partial panel (EU-23)	complete panel (EU-16)	partial panel (EU-23)	complete panel (EU-16)	partial panel (EU-23)	complete panel (EU-16)	partial panel (EU-23)	complete panel (EU-16)
2010	12.8	11.9	9.0	7.0	20.0	15.0	51.4	31.3
2015	14.4	14.2	7.8	7.4	20.5	15.6	58.3	37.3
2020	n.a.	11.7	n.a.	7.9	n.a.	12	n.a.	30.9

Regarding the country-level analysis, it appears that France, Germany, and Spain, as well as Bulgaria, Romania, and Finland, are among the most exposed (see Figure 1 and Table A1). In Figure 1, countries with a higher share of households in energy poverty are shown in darker colors, while countries with missing data are displayed in

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[21] In Table 5, the total number of energy-poor households in the EU-23 and EU-16 is calculated by multiplying the energy poverty share (based on M_LIHC_EU) by the total population.
[22] We downloaded the Inability to keep home adequately warm data from EUROSTAT.

white. In some countries and years, energy poverty affected more than one-third of the population (e.g., Bulgaria in 2010: 32.3%; Malta and Finland in 2015: 41.6% and 33.1%, respectively; Finland in 2020: 35.5%).

Figure 1

Share of households in energy poverty in the EU

(a) 2010

(b) 2015

(c) 2020
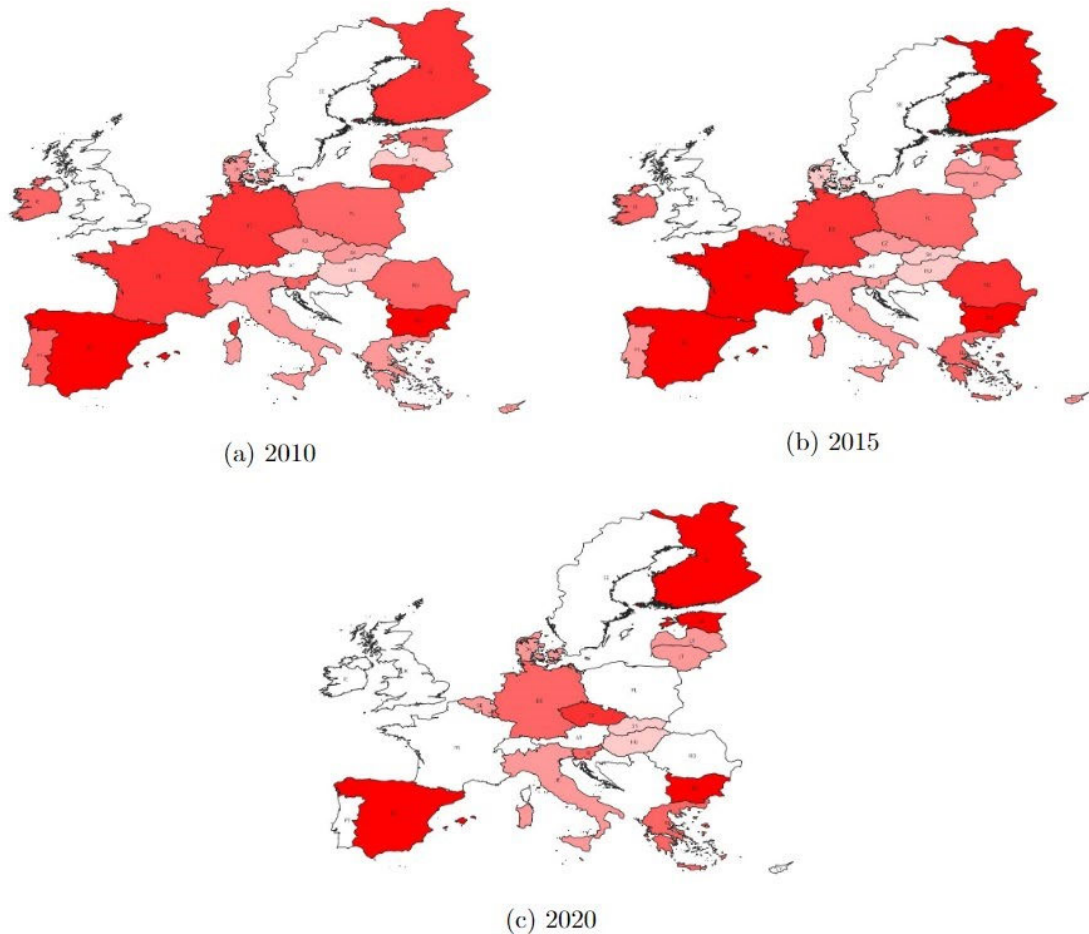
Note: countries with a higher share of households in energy poverty are shown in darker colors, while countries with missing data are displayed in white. The applied estimator is M_LIHC_EU.

Focusing on the four larger member states, Germany,[23] Spain and France had higher percentages of households in energy poverty than the EU-16 and EU-23 weighted averages in both 2010 and 2015 (Table 6). In 2020, this trend continued for Germany

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[23] We cannot perform an analysis on the spatial distribution within Germany as the variable "NUTS1" which, allegedly, should collect data on 16 NUTS1 regions (the German Landers) has, in reality, only 4 values, therefore we can't understand.

and Spain; there is no data available for France for that year. Italy consistently remained below the EU-23/16 averages. It is notable that Italy stands out as the only country where subjective beliefs, as measured by the "adequately warm" question from the EU-SILC survey, have higher value with respect to the objective M_LIHC_EU indicator. Furthermore, an analysis of the two subcomponents—the Low Income High Costs (LIHC) and the hidden energy poor— indicates that the hidden energy poor component is significant across all major countries and years.

This means that a considerable share of households, whose total equivalent expenditure falls below the median and whose heating expenditure is zero, is substantial, accounting for about one-fifth of the population in Spain and France. While the relatively higher adoption of electricity for space heating may explain the results for hidden energy poverty[24] in France, and even more so in Finland and Sweden,[25] the same cannot be said for Germany and Spain. One potential explanation is that heating costs might be included in the rent, which may make it difficult for some households to separate the two expenses.

As a result, there could be an underreporting of heating expenditure. Additionally, some instances of reported zeros may stem from imputation due to non-response or from households generating their own energy (e.g. chopping wood). Further investigation into these matters is necessary.

4. Conclusions

Energy poverty is a significant challenge for policymakers striving to achieve a smooth energy transition while ensuring social acceptance. Protecting the most vulnerable populations from energy or climate policies that increase relative prices can be accomplished by better targeting the most at-risk households. Despite considerable interest from policymakers, there is still no consensus on how to measure energy

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[24] A household is defined as energy poor if the sum of all energy expenditures, apart from electricity, is equal to zero, and its total equivalised expenditure falls below the median. See Faiella and Lavecchia (2021).

[25] In 2022, the share of electricity in final residential energy consumption for space heating was 30.5%, 23.8%, and 15.69% for Sweden (which is excluded from our analysis), Finland, and France, respectively, compared to 8.25%, 1.9%, and 1.8% for Spain, Italy, and Germany. see table 4, Energy consumption in households, Eurostat

poverty. The most commonly used indicator —the percentage of the population unable to keep their homes adequately warm — has been a topic of debate.

In this paper, we aimed to leverage the Household Budget Survey (HBS) data from the years 2010, 2015, and 2020. Although these three years cover a substantial time span and a number of countries, our analysis highlighted several difficulties due to a lack of harmonization in the survey as well as inadequate treatment of the data after collection. Our proposed indicator, M_LIHC_EU, shows similar magnitude and variation over time across both samples, which partially reassures us. While data quality is expected to improve starting in 2026, thanks to partial harmonization under EU Regulation 2019/1700, there are still opportunities to enhance the quality of the existing data waves. As recently suggested to the European Commission, in the case of energy poverty, we need better data for better policy. Our work offers some useful suggestions for this improvement in the case of the EU-HBS.

Table 6

Households in Energy Poverty (EP) in some selected countries
(percentage points)

Year	Estimator	Germany	Spain	France[26]	Italy
2010	M_LIHC_EU	16.2	21.0	19.3	6.1
	inadequately warm	5	7.5	5.7	11.6
	TPR	16.6	4.7	10.0	16.4
2015	M_LIHC_EU	17.8	23.2	21.9	7.0
	inadequately warm	4.1	10.6	5.5	17.0
	TPR	19.1	5.8	10.1	11.3
2020	M_LIHC_EU	14.1	23.2	n.a.	7.5
	inadequately warm	7.0	10.9	6.7	8.3
	TPR	14.1	6.9	10.1	12.7

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[26] The 2020 HBS for France was obtained by inflating the 2015 values. For the purposes of our analysis, this makes this data unfit.

Table 7

Households in Energy Poverty (EP): focus on the M_LIHC_EU indicator
(percentage points)

Year	Estimator	Germany	Spain	France	Italy
2010	M_LIHC	16.2	21.0	19.3	6.1
	LIHC	3.1	2.0	4.6	2.7
	hidEP	13.3	19.7	15.5	3.5
2015	M_LIHC	17.8	23.2	21.9	7.0
	LIHC	3.2	2.1	4.2	3.1
	hidEP	14.8	21.8	19.1	4.0
2020	M_LIHC	14.1	23.2	n.a.	7.5
	LIHC	4.1	2.1	n.a.	3.4
	hidEP	10.2	22.0	n.a.	4.3

Share of households in energy poverty per member state

(percentage points)

GEO	2010	2015	2020
Austria	n.a.	n.a.	n.a.
Belgium	8.4	9.4	8.2
Bulgaria	32.3	21.6	24.1
Croatia	n.a.	n.a.	n.a.
Cyprus	5.1	8.5	n.a.
Czeck Rep.	8.5	10.0	18.6
Denmark	5.8	4.9	7.5
Estonia	13.9	19.0	24.4
Finland	16.5	33.1	35.5
France	19.3	21.9	n.a.
Germany	16.2	17.8	14.1
Greece	8.9	14.9	13.2
Hungary	2.7	2.7	1.6
Ireland	12.3	14.0	n.a.
Italy	6.1	7.0	7.5
Latvia	5.0	5.9	5.9
Lithuania	18.2	7.8	9.6
Luxembourg	5.7	6.2	11.1
Malta	41.6	42.3	n.a.
Poland	11.6	10.1	n.a.
Portugal	12.3	10.0	n.a.
Romania	14.3	15.3	n.a.
Slovakia	8.1	4.8	3.3
Slovenia	10.2	7.7	12.1
Spain	21.0	23.2	23.2
Sweden	n.a.	n.a.	n.a.

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